Exercise 2: Data Types and Variables

Name - Anish Rao

Student Number - 20066423

Group - C

Colab Notebook Link

1. Create a variable `age` and assign it the value 25.

```
age = 25
```

2. Create a variable `name` and assign it a string containing your name.

```
name = "Anish Rao"
```

3. Print the type of the variable `age`.

```
print(type(age))
```

```
<class 'int'>
```

4. Convert the variable `age` to a string and store it in a new variable `age_str`.

```
age_str = str(age)
print(type(age_str))
```

```
<class 'str'>
```

5. Create a variable `height` and assign it the value 175.5 (floating-point number).

```
height = 175.5
```

6. Print the type of the variable `height`.

```
print(type(height))
```

```
<class 'float'>
```

7. Create a variable `is_student` and assign it a boolean value representing whether you are a student or not.

```
is_student = True
```

8. Print the type of the variable `is_student`.

```
print(type(is_student))
```

```
<class 'bool'>
```

9. Create a list `colors` containing the names of three colors.

```
colors = ["red", "blue", "green"]
```

10. Print the second element of the list `colors`.

```
print(colors[1])
```

```
blue
```

11. Create a tuple `dimensions` containing the length, width, and height of a box.

```
dimensions = (10, 20, 15)
```

12. Print the third element of the tuple `dimensions`.

```
print(dimensions[2])
```

```
15
```

13. Create a dictionary `person` with keys "name", "age", and "city", and assign appropriate values.

```
person = {"name": "Anish Rao", "age": 25, "city": "Dublin"}
```

14. Print the value associated with the key "age" in the dictionary `person`.

```
print(person["age"])
```

```
25
```

15. Create a set `unique_numbers` containing three unique integers.

```
unique_numbers = {1, 2, 3}
```

16. Add a new integer to the set `unique_numbers`.

```
unique_numbers.add(4)
print(unique_numbers)
```

```
{1, 2, 3, 4}
```

17. Create a variable `x` and assign it the value 10.

```
x = 10
```

18. Increment the value of `x` by 5.

```
x += 5
print(x)
```

```
15
```

19. Create a variable `y` and assign it the value of `x` squared.

```
y = x ** 2
print(y)
```

```
225
```

20. Swap the values of variables `x` and `y`.

```
print("x =", x)
print("y =", y)
x, y = y, x
print("After swapping:")
print("x =", x)
print("y =", y)
```

```
x = 15
y = 225
After swapping:
x = 225
y = 15
```